

THIRTY MILLION AGROFORESTERS: RUSSIA'S FAMILY GARDENS

Leonid Sharashkin¹ and Michael Gold²

¹Deep Snow Press, 848 N. Rainbow Blvd. #1947, Las Vegas, NV 89107 USA.

²University of Missouri Center for Agroforestry, 203 ABNR, Columbia, MO 65211 USA.

Contact Dr Sharashkin via www.deepsnowpress.com

Abstract: Today, over 30 million Russian households engage in food gardening and collectively produce over half of Russia's agricultural output (Megre 2004), using less than 6% of agricultural land in the country. The small size of plots allocated for household production (typically 0.06 ha for urban and 0.25 ha for rural households) promoted extremely intensive growing practices and wide integration of perennial crops (especially fruit-bearing shrubs and trees) with annual crops. This resulted in the proliferation of highly diverse, multi-layer gardens. Our study of economic, agricultural, social, and cultural characteristics of family gardens in the Vladimir region (central part of European Russia) included an in-depth survey of 1,500 households. It confirmed gardens' most important contribution to the household and regional economy, with 95% of households either tending their own garden or benefiting from the gardens of others. These highly diverse, predominantly organic operations include, on average, 13 different vegetable crops and 7 different perennial fruit, nut, and berry crops grown on the same small plots, which can be seen as micro-scale agroforestry systems. It was also found that participation in food gardening does *not* decrease with growing income, which attests to the important social and cultural dimensions of the practice. The gardeners, who share strong agrarian ethics, see in working the land a symbol of self-reliance, a family space, an opportunity for social interaction and contact with living nature, and a continuation of a millennial tradition of living in union with Mother Earth.

Keywords: household, gardening, dacha, self-provisioning, self-sufficiency, homestead, family farm.

INTRODUCTION

Today's mainstream commercial agriculture continues to face formidable challenges. It has a heavy environmental footprint, often lacks social responsibility, and is highly dependent on heavy machinery, chemicals, availability of petroleum, and government subsidies. In search for more benign alternatives agroforesters and researchers in sustainable agriculture have been drawn to the study of home gardens, which often serve as examples of remarkable sustainability and productivity (e.g. Wojtkowski 1993; Kumar and Nair 2004).

Sustainability and productivity of micro-scale family agriculture is especially noticeable in contemporary Russia. Today, just as a hundred years ago, or a thousand years ago, the majority of Russia's agricultural output is coming *not* from large-scale commercial industrialized operations, but from household gardens. Russia's family gardens currently produce over half of the country's agricultural output and represent a major sector of the country's economy, involving two thirds of the population. Despite this prominence, the significance of household gardening has been continuously downplayed by most scholars and policy-makers, and this practice has been viewed as a recent phenomenon, as an adjunct to the country's industrial

agriculture, or as a temporary response to the hardships of Russia's economic transition (e.g., Seeth et al. 1998; Southworth 2006).

Our study of the current status of family agriculture, of Russia's agrarian history, and the results of our 2006 survey of 1,500 families in the Vladimir region show that gardens not only have high economic, social, and cultural significance, but also represent a highly sustainable practice embedded in the region's — and the country's — environmental, socioeconomic, and cultural context. The survey offers detailed information on the economic, agricultural, social, and cultural dimensions of gardening in the Vladimir region, including respondents' adherence to a wide range of agrarian values. Based on the results, family gardening can be seen as a highly sustainable, diversified, and culturally important small-scale agroforestry practice, which needs to be given due consideration by scholars and policy-makers.

METHODOLOGY

Our study included two parts. The first part was an overview of the current status of family gardening on the national scale, on the basis of available research and governmental statistics. These data helped paint the big picture, but it lacked fine detail. The second part was therefore a detailed survey of household gardening in one selected region -- the Vladimir region of central European Russia. The Vladimir region has a population of 1.46 million people (78% urban, 22% rural), and a territory of 29,100 km² (52% is forested and the rest is a mixture of agricultural lands and urban development). It lies in the temperate climate zone east of the Moscow region.

Since gardening is usually practiced by a household as a whole (rather than by separate individuals), our unit of observation was a *household*. We used multi-stage sampling technique, which yielded a random sample of 1,500 households. The survey questionnaire was developed especially for this study and was administered through face-to-face interviews. We have been able to achieve close to 80% response rate.

ECONOMIC DIMENSION

On the national scale family gardening stands out as Russia's *primary* agriculture. Over the last decade, the contribution of household food gardens to the country's national agricultural output consistently exceeded 50%, and represented around 2.3% of Russia's Gross Domestic Product (GDP). Gardener's contribution to the GDP (384 billion rubles -- approx. US\$14 bn) has been greater, for example, than the contribution to the GDP of the whole electric power generation industry (317 bn rubles); significantly greater than all of forestry, wood-processing, and pulp and paper industry combined (180 bn); significantly greater than the coal (54 bn), natural gas (63 bn), and oil refining (88 bn) industries combined (Rosstat 2006).

According to Russia's Federal Statistical Service Rosstat (2005), in 2004, Russian gardeners produced 33 million tons of potatoes (93% of total agricultural output of the country), 12 million tons of vegetables (80%), 3 million tons of fruit (81%), 17 million tons of milk (52%), and 3 million tons of meat (52%). All this output has been achieved by using less than 6% of agricultural lands in the country (Rosstat 2007a) and by gardeners tending their plots part-time in a country much of the territory of which has mere 110 days of growing season per year.

Of the 33 million garden-plots in 2005, 51% were in urban and peri-urban areas (and were worked predominantly by urban households), and the 49% were in rural areas. Of the more than 80,000 gardening associations in existence in 2006, more than half were formed prior to 1991, which serves as evidence that gardening *cannot* be seen as merely a temporary response to the economic crisis of the 1990s.

On the regional level, the picture is equally impressive. According to our 2006 survey of the Vladimir region, 78.1% of households have a garden of their own. An additional 16.7% of households use somebody else's gardens or garden output. *Therefore, a total of 94.8% of households of the Vladimir region either have their own garden or contribute to/benefit in some way from the gardens of others.* This figure attests to the remarkable degree of connectedness to the local soil and local food still maintained by families even in this highly urbanized and industrialized region. Twenty-six percent (26%) of all urban households in the region, and 42% of all rural households in the region satisfy at least 41% of their food consumption needs from the food they produce themselves.

Part of the reason why -- despite its obvious prominense -- household gardening is routinely "overlooked" by both policy-makers and many researchers is the fact that it is largely *subsistence* oriented rather than market oriented, and therefore does not fit into the "official" economy. According to the 2006 Census of Agriculture (Rosstat 2007a), 86.6% of rural gardeners (14.8 mln households) were growing for subsistence; for 12.8% it was a source of additional income, and only 0.6% relied on it as the primary source of monetary income. For urban gardeners, the purpose of production (subsistence vs. market) was not even reported, since the vast majority of urban growers are assumed to grow for subsistence only. According to the results of our survey from the Vladimir region, only 15% of the gardening households sell part of their produce, compared to 49% of families who share part of their harvest for free, and 100% of households who consume the greater part of what they grow. The prominence of subsistence and sharing has extremely important food security ramifications: thus, when American taxpayer dollars were being used in the early 1990s to send food aid to Russia, Russia actually continued to be more food secure (due to the proliferation of family gardens and sharing) than Western Europe or Japan (Sedik et al. 2003). The culture of sharing is also part of Russia's ancient tradition and worldview, as will be discussed below.

AGRICULTURAL AND AGROFORESTRY DIMENSION

It was the policy of the Soviet government (and to a large extent continues to be the reality to the present day) to put stringent limits on the size of the plots that were made available for family agriculture. As a result, the average size of household garden-plots is very small: 0.09 ha for urban families and 0.44 ha for rural households (Rosstat 2007b). The small size of the plot, coupled with the desire -- or necessity -- to grow a sizable share of your food supply yourself promoted extremely intensive cultivation practices, with a large number of annual (mostly vegetables) and perennial crops (berry shrubs and fruit trees) planted together.

Indeed, the Russian family garden-plots can be seen as miniature agroforestry systems, since their combinaion of annual and woody perennial plantings is *intentional, intensive, integrated,*

and *interactive* (for a discussion of these four traits of an agroforestry system see Gold and Garrett 2008). Even though Russia's household gardens occupy less than 6% of the country's agricultural lands, they account for 59% of all perennial crop plantings and 65% of perennial berry, fruit and nut plantings in the country (Rosstat 2007a). The results of our survey in the Vladimir region show that only about 2% of region's households with a garden-plot limit their gardening activity to a single agricultural use (such as exclusively vegetable growing). The remaining 98% combine different agricultural uses. On average, each gardening household grows 13 different vegetable crops (including greens) and 7 different fruit, berry, and nut crops *on the same small plot*.

This high level of diversity certainly has important environmental sustainability benefits, which are further enhanced by the fact that 74% of rural gardeners and 37% of urban gardeners in the region stick to exclusively organic growing methods. The most popular fertilizer continues to be manure (in use by 86% of gardeners), the most popular method of weed control is manual weeding (90% of gardeners), while 52% of all gardeners (especially urbanites) do use pesticides for controlling pests.

Gardeners of the Vladimir region also play an important role in preserving heirloom varieties of agricultural plants through seed saving and exchange. While one third of gardeners now purchase all or most of their seeds on the market, the remaining two thirds practice seed saving at least to some extent. Eighteen percent (18%) of gardeners rely entirely or to a large extent on their own seeds, while 11% obtain seeds from their friends and neighbors.

SOCIAL AND CULTURAL DIMENSION

Both national-level statistics, research, the study of Russia's agrarian history, and the results of our survey of the Vladimir region confirm that the significance of family gardening goes well beyond its economic function. We have found that the rate of participation in food gardening *does not decrease* with household's growing income -- which further confirms that family gardening in Russia is not a temporary response to poverty. The gardening households of the Vladimir region see their gardens as an auxiliary source of food (77%), a way to maintain connection to the earth (74%), a hobby and recreation (73%), and family space for social interaction (70%). Our survey included a specially developed "agri-cultural" scale to measure the cultural importance of gardening and contact with Mother Earth for gardeners and non-gardeners alike (0 representing absolute lack of importance of the cultural dimension; 50 being the neutral point, and 100 standing for the greatest cultural and spiritual significance of gardening). The average score (among *all* residents of the Vladimir region, including those with no garden) was 73, illustrating that very strong agrarian ethics is still an important part of Russian culture, and also vindicating the views of economists such as Chayanov (Kremnev 1920; Chayanov 1925) and Schumacher (1975) who maintained that one of the primary functions of agriculture is maintaining Man's connection with nature, and making a piece of Earth beautiful. Indeed, even the word *dacha*, the Russian word for "garden", is based on the verb "to give", whereas the word *farm* derives from the verb "to take" -- which highlights the two very different mindsets and attitudes to the Earth and our place on it.

CONCLUSIONS

Today, gardening continues to be Russia's *primary* agriculture -- both in its economic significance and as a practice based on a millennia-long tradition of living a simple and self-sufficient, land based life. Russia's example shows that a highly decentralized, small-scale, sustainable, and culturally rich agroforestry food production system is possible today on a national scale. Russian gardeners are not dependent on government subsidies, petroleum availability, hired labor, or complex and industrialized food distribution networks, and demonstrate the viability -- and the benefits -- of small-scale family agriculture. These findings, coupled with a growing body of evidence confirming the attractiveness of small-scale growing methods even on purely economic grounds (e.g., Ohio State University 2008), call for a re-assessment of our outlook on agriculture, and offer a vision of a sustainable and beautiful agriculture of the future.

ACKNOWLEDGEMENTS

This paper is based on Leonid Sharashkin's doctoral dissertation *The Socio-Economic and Cultural Significance of Food Gardening in the Vladimir Region of Russia* (Michael Gold, dissertation supervisor), defended in April 2008 at the University of Missouri-Columbia. The entire text of the dissertation is available for a free download from www.primaryagriculture.com. This work was funded through the University of Missouri Center for Agroforestry. Any opinions, findings, conclusions or recommendations expressed in this paper are those of the authors.

LITERATURE CITED

- Chaianov, A.V. 1925. Organizatsiia krest'ianskogo khoziaistva. Kooperativnoe izdatel'stvo, Moskva.
- Gold, M.A. and Garrett, H.E. 2008. Agroforestry nomenclature, concepts, and practices. *In* North American agroforestry: An integrated science and practice. 2nd edition. Edited by H.E. Garrett. American Society of Agronomy, Madison, Wisconsin.
- Kremnev, I. 1920. Puteshestvie moego brata Alekseia v stranu krest'ianskoi utopii. Gosudarstvennoe izdatel'stvo, Moskva.
- Kumar, B.M. and Nair, P.K.R. 2004. The enigma of tropical homegardens. *Agroforestry Systems* 61:135–152.
- Megre, V. 2004. Anastasia. Ringing Cedars Series, Book 1. Columbia, Missouri: Ringing Cedars Press.
- Ohio State University. 2008. Earn big dollars with high-value crops. *Farm Science Review*. <http://fsr.osu.edu/PRdollars.html>
- Rosstat. 2005. Rossiia v tsifrakh 2004. Federal'naia sluzhba gosudarstvennoi statistiki, Moskva.

- Rosstat. 2006. Rossiia v tsifrakh 2005. Federal'naia sluzhba gosudarstvennoi statistiki, Moskva.
- Rosstat. 2007a. Vserossiiskaia sel'skokhoziaistvennaia perepis' 2006 goda: Predvaritel'nye itogi. <http://www.gks.ru/news/perepis2006/totals.htm>
- Rosstat. 2007b. Rossiia v tsifrakh 2006. Federal'naia sluzhba gosudarstvennoi statistiki, Moskva.
- Schumacher, E.F. 1975. Small is beautiful: Economics as if people mattered. Harper & Row, New York.
- Sedik, D., Sotnikov, S., and Wiesmann, D. 2003. Food security in the Russian Federation. FAO economic and social development paper 153. Food and Agriculture Organization of the United Nations, Rome.
- Seeth, H.T., Chachnov, S., Surinov, A., and von Braun, J. 1998. Russian poverty: Muddling through economic transition with garden plots. *World Development* 26:1611–1623.
- Southworth, C. 2006. The dacha debate: Household agriculture and labor markets in postsocialist Russia. *Rural Sociology* 71(3):451–478.
- Wojtkowski, P.A. 1993. Toward an understanding of tropical home gardens. *Agroforestry Systems* 24(2):215–222.

This publication is made available in electronic form, with Authors' consent,

by

Deep Snow Press, www.DeepSnowPress.com

This document can be accessed at: <http://www.deepsnowpress.com/downloads/afta09.pdf>